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Certified Environmental Product Declaration
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tCentric Hybrid™

Our most sought after and customizable ergonomic office chair. Its innovative, modular design and range of options provide more support than ever for today's hybrid work environments.

The tCentric Hybrid combines the best attributes of the leading mesh chair with the industry leading benefits of ergoCentric's fully upholstered chairs. Three configurations ensure comfort for everyone, regardless of body type or personal preferences.

The tCentric Hybrid's emphasis on ergonomics is reinforced by the number of patented adjustment features built into its design not found anywhere else.

The model selected for this Environmental Product Declaration is the tCentric Hybrid task chair with standard options, a chair with a reference service life of more than 10 years. This chair is designed with a glass-reinforced nylon base, nylon casters, upholstered seat, and mesh back. This model is manufactured in both Mississauga, Ontario and St. Louis, Missouri and is primarily produced for the North American market by ergoCentric.

The life cycle assessment of tCentric Hybrid is performed in accordance with the ISO standards 14025 (2006), 14040 (2006), 14044 (2006), 21930 (2017), and BIFMA PCR for Seating:
UNCPC 3811 v3.

tCentric Hybrid complies with ANSI/BIFMA X5.1 and comes with a 12-year warranty. One chair is required to meet the functional unit of seating one individual for a 10-year period.

For additional information visit the following websites:
[Our environmental commitment]
[Product information]
[Product warranty]

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EPD commissioner	ergoCentric
Manufacturing facility addresses	275 Superior Blvd, Mississauga, Ontario L5T 2L6, Canada 2079 Congressional Dr, St Louis, Missouri 63146, United States
Product group	Seating
Product name	tCentric Hybrid
Product intended use	Office chair
Product reference service life	10 years
Reference standards	ISO 14025, ISO 14040, ISO 14044, ISO 21930
EPD scope	Cradle to Grave
EPD number	EPD10848
EPD date of validity	June 12, 2023
EPD date of expiration	June 12, 2028
EPD type	Product specific
EPD product coverage	The model chosen for this analysis is tCentric Hybrid standard options plus headrest and lumbar (Model # T-MT-TLS-TAHRDB-TCL360)
Intended audience	Business to Business
Year of reported manufacturer data	2021
Functional unit	One unit of seating to seat one individual for a reference service life of 10 years
Applicable markets/regions	North America
LCA software and database version	SimaPro 9.4 (2022), Ecoinvent 3.8, USLCI
LCIA methodology and version number	TRACI 2.1, IPCC AR6
Program administrator	NSF Certification LLC 789 N. Dixboro, Ann Arbor, MI 48105 www.nsf.org
Reference PCR and version number	BIFMA PCR for Seating: UNCPC 3811 V3 ext 2022-110
The PCR review was conducted by:	Review Panel Chaired by Dr. Thomas Gloria
This declaration and its life cycle assessment was independently verified in accordance with ISO 14025: 2006, ISO 14040: 2006, 14044:2006, 21930:2017 and the reference PCR: BIFMA PCR for Seating UNCPC 3811 v3 ext 2022-110. Type of review ☐ INTERNAL ☒ EXTERNAL	 Jack Geibig, jgeibig@ecoform.com
The reference life cycle assessment was conducted in accordance with ISO 14040, 14044, 21930, and the referenced PCR by NSF internal and external LCA team members:	Jim Mellentine, jmellentine@nsf.org Tejan Adhikari, tadhikari@nsf.org

Disclaimer - This EPD was not written to support comparative assertions. EPDs based on different PCRs, or different calculation models, may not be comparable. When attempting to compare EPDs or life cycle impacts of products from different companies, the user should be aware of the uncertainty in the results due to and not limited to the practitioner's assumptions, the source of the data used in the study and the software tool used to conduct the study. EPDs are comparable only if they comply with ISO 21930, use the same sub-category PCR where applicable, include all relevant information modules and are based on equivalent scenarios with respect to the context of construction works.

Reference flow

One tCentric Hybrid chair with standard options. No other configurations are represented by these results. The tCentric Hybrid office chair was chosen for this study based on sales.

Material content

The following tables list the materials contained in both the product and associated product packaging.

***Table 1** – Material contents of the tCentric Hybrid chair*

Material	Weight (kg)	Weight (%)	Resource Type
Wood	2.10	7.5%	Virgin renewable
Cardboard & Paper	0.0760	0.3%	
Steel	16.8	60.2%	Recycled, Virgin nonrenewable
Glass-filled nylon	4.08	14.6%	Virgin nonrenewable
Nylon	0.942	3.4%	
Polyurethane	1.80	6.4%	
Polypropylene	0.988	3.5%	
Polyester	0.267	1.0%	
Acrylic & rubber	0.162	0.6%	
Polyethylene	0.258	0.9%	
Cardboard & Paper	0.0760	0.3%	
Aluminum	0.396	1.4%	
Adhesive	0.0150	<0.1%	
Zinc fasteners	0.0144	<0.1%	
Total	27.9	100.0%	

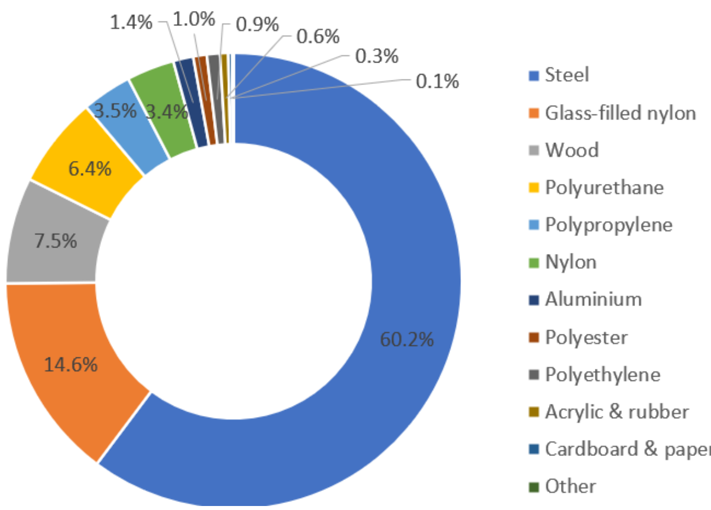

***Figure 1** – Material contents of the tCentric Hybrid chair*

***Table 2** – tCentric Hybrid product packaging materials*

Packaging	Weight (kg)	Weight (%)	Resource Type
Cardboard	1.63	78.3%	Virgin renewable
Polyethylene bag	0.45	21.7%	Virgin nonrenewable
Total	2.09	100%	

The recycled content of the chair is approximately 41% due to the use of industry average scrap content of steel used in the table. The background data set used does not specify the portion of scrap that is preconsumer versus postconsumer.

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Goal and scope

The potential environmental impacts of tCentric Hybrid (including packaging) throughout its entire life cycle were assessed conforming to international standards for life cycle assessment (ISO 14040 / 14044) (2006) and the BIFMA PCR for Seating: UNCPC 3811 v3 ext 2022-110. This business-to-business Type III declaration conforms to ISO 14025 (2006) and considers the typical tCentric Hybrid chair with standard options plus headrest and lumbar, which weighs 27.89 kg excluding packaging. The studied packaging system for this assessment is a weighted average of various packaging configurations and weighs 2.09 kg.

Functional unit

One chair (unit of seating) for one individual for a reference service life of 10 years.

System boundary

The life cycle assessment considers the full life cycle of the product (cradle to grave). This includes all activities from raw material acquisition and pre-processing, production, product distribution and storage, use and maintenance, and end-of-life management. The stages of the life cycle were separated into modules according to the PCR and ISO 21930, as shown in Figure 2. The ISO 21930 results are shown in the appendix.

PCR stages	Materials acquisition and preprocessing		Production	Distribution, storage, and use									End of life			
ISO 21930 stages and information modules	Production			Construction		Use							End of life			
	Extraction and upstream production	Transport to factory	Manufacturing	Transport to site	Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction/Demolition	Transport	Waste processing	Disposal of waste
	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Note – MND = module not declared; X = module included															

Figure 2 *- Life cycle stages and modules according to the PCR and ISO 21930*

The life cycle stages included in this assessment follow the BIFMA PCR for Seating: UNCPC 3811 v3. The figure above identifies the life cycles stages and information modules in scope and considered in this life cycle assessment. It is important to clarify that for installation, maintenance, repair, replacement, refurbishment, operational energy, operational water use, deconstruction/demolition, and waste processing, the study assumes there is no relevant activity and therefore no impacts to report. Therefore, they have zero contribution to the overall life cycle assessment of the chair. While these stages are included in the system boundary, for ease of formatting they are not specifically included in the results tables in this document.

Allocation

The general principles of allocation were provided by the PCR, which is aligned with the ISO 14044 and ISO 21930 standards. Each of the ergoCentric facilities assemble multiple products. The facility-wide inputs and outputs were evenly divided for each furniture unit produced. For materials that cross the system boundary, this study follows the cut-off approach. Any recovery processes for secondary (i.e., recycled) materials carry no burden as they enter the system, and likewise there is no allocation of impacts away from the studied system to any wastes that might be reused, recycled, or recovered for use in a subsequent product system.

Cut-off criteria

Cut-off criteria are used in LCA for the selection of processes or flows to be included in the system boundary. In the current study, cut-off criteria consistent with the PCR and ISO 21930 were used. Any mass, energy flow, or environmental impact within the product boundary, which consists of less than 1%, may be omitted. Cumulative omitted mass or energy flows shall not exceed 5%. In this study, all known mass and energy flows were included. Further, all substances with hazardous or toxic properties that can be of concern for human health and/or the environment must be identified and included even if it is less than 1% of the total mass. The products in this study do not contain any hazardous or toxic substances.

Product transport

The following information was used to represent transport impacts of the finished product. Finished and packaged chairs are shipped either direct to the customer, to a retail location, or to a distributor. The weighted average distances based on sales data were used.

Road transport

Table 3 *– Data used to model road transport of final product to the installation site*

Vehicle type	Distance (km)	Fuel economy (l/100 km)
Diesel-fueled combination truck	1,400	0.076
Gasoline-fueled passenger truck	1.2	0.22
Diesel-fueled light commercial truck	49.1	0.77

Sea transport

Table 4 – Data used to model sea transport of final product to the installation site

Vehicle type	Distance (km)	Fuel economy (l/100 km)
Residual fuel oil ocean freighter	232	0.014

For retail and distributor destinations, additional electricity and natural gas quantities were estimated from average commercial data based on assumed duration of 30 days at those facilities.

Table 5 – Energy consumed in retail and distribution buildings prior to arrival at the installation site (per functional unit)

Building type	Electricity (kWh)	Natural gas (m3)
Retail	0.750	0.0362
Warehouse	2.38	0.209

Installation

The following information was used to represent installation of the product into the building. Some assembly is required by the final customer, which is done by hand with no energy, water, or other materials required. No product materials are wasted or otherwise output during installation, nor are any emissions to air, soil, or water generated. Outputs of packaging waste and transport of the packaging to a recycling or waste processing facility are included. The rate of recycling of cardboard and plastic is based on the EPA WARM model with a recycling rate of 68.2% of cardboard and 8.7% of plastic. The remaining amounts were assumed to be landfilled at a rate of 80% and incinerated (without energy recovery) at a rate of 20%. The mass and disposal pathway for packaging is shown in the table below. As a biogenic packaging material, the global warming potential of cardboard must be disclosed. We assume cardboard contains approximately 50% carbon by mass. Therefore, the carbon content of the cardboard is 0.26 kg. Multiplying by 44/12 (the ratio of CO_2 molar mass per carbon molar mass) results in 0.953 kg CO_2e. The packaging waste is assumed to travel 32 km to a recycling/waste facility in a diesel-fueled refuse truck that consumes 3.83E-05 liters of fuel per kg-km.

Table 6 – Packaging waste assumptions

Packaging waste and disposal pathway	Mass (kg)
Cardboard to landfill	0.415
Cardboard to recycling	1.11
Cardboard to incineration	0.104
Plastic to landfill	0.331
Plastic to recycling	0.0402
Plastic to incineration	0.0828

End of Life Materials Handling

The deconstruction/demolition stage (C1) of the life cycle involves disassembling the chair. This activity is done by hand, with no energy or materials needed. Homogeneous materials that can be disassembled are assumed to be recycled at a rate consistent with the US EPA waste statistics. The remaining material is assumed to be landfilled at a rate of 80% and incinerated (without energy recovery) at a rate of 20%. The chair materials are assumed to be collected curbside along with other unrelated waste by a typical refuse truck. Due to the large proportion of metal and plastic (commonly recyclable materials) in the product, the maximum potential recyclability of the product is approximately 79%. That rate is the maximum amount of the product that is recyclable, based on the availability of recycling facilities in the specified regions and the ability of the product to be disassembled. Note that, per the requirements of the PCR, the end-of-life results presented in this EPD were calculated using the US EPA's recycling rates within the 2020 Municipal Solid Waste Report for parts that can be disassembled.

***Table 7** – Product disposal pathway assumptions*

Disposal pathway	Weight (kg)	Weight (%)
Recycled	4.45	16.5%
Landfilled	18.0	66.8%
Incinerated	4.50	16.7%

The following components can be disassembled with common hand tools such as a wrench or screwdriver:

Seat base	Brackets
Seat cover	Control lever
Fasteners	Spring
Seat filler	Button
Seat wood	Control paddles

End of life transport

The following information was used to represent transport impacts at the product's end of life. The disassembled materials are either transported to a recycling facility, landfill, or waste incineration. In each case, the assumed transport distance is 32 km as required by the PCR.

Road transport

***Table 8** – Product end-of-life transport assumptions*

Vehicle type	Distance (km)	Fuel economy (l/100 km)
Diesel-fueled refuse truck	32.0	0.11

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Life cycle assessment results

All results are given per functional unit.

IPCC AR6

In the following table, global warming potential is abbreviated as GWP. Both 100-year (GWP-100) and 20-year (GWP-20) time horizons are reported based on factors in the International Panel on Climate Change (IPCC) sixth assessment report (AR6).

Indicator	Unit	Total	Materials acquisition and preprocessing	Production	Distribution, storage, and use	End of life
GWP-100 fossil	kg CO_2 eq	1.14E+02	7.21E+01	2.99E+01	6.53E+00	5.03E+00
GWP-100 biogenic	kg CO_2 eq	5.04E+00	9.83E-01	2.33E+00	1.02E+00	7.10E-01
GWP-100 land	kg CO_2 eq	8.08E-01	1.39E-01	6.44E-01	2.51E-02	1.45E-04
GWP-100 CO_2 uptake	kg CO_2 eq	-8.20E+00	-4.23E+00	-3.94E+00	-2.63E-02	-1.92E-03
GWP-100 net	kg CO_2 eq	1.11E+02	6.90E+01	2.90E+01	7.54E+00	5.74E+00
GWP-20 fossil	kg CO_2 eq	1.33E+02	8.68E+01	3.37E+01	7.04E+00	5.94E+00
GWP-20 biogenic	kg CO_2 eq	6.93E+00	1.19E+00	2.59E+00	2.21E+00	9.37E-01
GWP-20 land	kg CO_2 eq	8.09E-01	1.39E-01	6.44E-01	2.51E-02	1.49E-04
GWP-20 CO_2 uptake	kg CO_2 eq	-8.20E+00	-4.23E+00	-3.94E+00	-2.63E-02	-1.92E-03
GWP-20 net	kg CO_2 eq	1.33E+02	8.39E+01	3.30E+01	9.25E+00	6.88E+00

TRACI

In the following table, results are reported based on required indicators from The Tool for the Reduction and Assessment of Chemical and Other Environmental Impacts (TRACI), version 2.1.

Indicator	Unit	Total	Materials acquisition and preprocessing	Production	Distribution, storage, and use	End of life
Global warming potential	kg CO_2 eq	1.11E+02	7.10E+01	2.81E+01	7.01E+00	5.06E+00
Acidification potential	kg SO_2 eq	5.83E-01	4.25E-01	1.13E-01	4.19E-02	3.84E-03
Smog formation potential	kg O_3 eq	7.93E+00	4.82E+00	1.92E+00	1.08E+00	1.08E-01
Eutrophication potential	kg N eq	3.48E-01	1.41E-01	6.71E-02	1.46E-02	1.25E-01
Ozone depletion potential	kg CFC-11 eq	1.32E-05	6.94E-06	6.08E-06	1.05E-07	3.10E-08

Resource use and waste indicators

The following inventory-based indicators are calculated using the suggested methods in the American Center for Life Cycle Assessment (ACLCA) Guidance to Calculating Non-LCIA Inventory Metrics in Accordance with ISO 21930:2017. The abiotic depletion potential metric uses the ReCiPe 2016 midpoint method.

Indicator	Unit	Total	Materials acquisition and preprocessing	Production	Distribution, storage, and use	End of life
Renewable primary resources used as energy carrier	MJ, LHV	2.67E+02	1.15E+02	1.46E+02	6.31E+00	7.08E-02
Renewable primary resources with energy content used as material	MJ, LHV	4.16E+02	3.61E+01	3.80E+02	0.00E+00	0.00E+00
Renewable primary energy demand, total	MJ, LHV	6.84E+02	1.51E+02	5.26E+02	6.31E+00	7.08E-02
Nonrenewable primary resources used as energy carrier	MJ, LHV	2.44E+03	1.24E+03	1.10E+03	9.63E+01	4.09E+00
Nonrenewable primary resources with energy content used as material	MJ, LHV	1.77E+02	1.57E+02	2.03E+01	0.00E+00	0.00E+00
Nonrenewable primary energy demand, total	MJ, LHV	2.62E+03	1.40E+03	1.12E+03	9.63E+01	4.09E+00
Primary Energy Demand, Total	MJ, LHV	3.30E+03	1.55E+03	1.65E+03	1.03E+02	4.16E+00
Secondary materials	kg	1.65E+01	1.56E+01	9.35E-01	0.00E+00	0.00E+00
Renewable secondary fuels	MJ, LHV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nonrenewable secondary fuels	MJ, LHV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Recovered energy	MJ, LHV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Freshwater consumed (net)	m^3	7.52E+00	4.21E+00	2.71E+00	5.93E-01	5.79E-03
Hazardous waste disposed*	kg	0.00E+00	x	0.00E+00	0.00E+00	0.00E+00

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Nonhazardous waste disposed*	kg	4.45E-01	x	2.32E+00	9.33E-01	1.73E+01
High-level radioactive waste	kg	4.98E-02	1.11E-02	3.78E-02	7.99E-04	7.75E-05
Intermediate and low-level radioactive waste	kg	5.78E-02	1.00E-02	4.69E-02	9.13E-04	1.26E-06
Components for reuse	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling*	kg	6.51E+00	x	3.69E-01	1.15E+00	4.99E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Recovered energy exported from the product system	MJ, LHV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Abiotic depletion potential for fossil resources	kg oil eq.	4.14E+01	2.30E+01	1.36E+01	4.67E+00	9.38E-02

****Most datasets for upstream materials do not quantify these metrics and thus results may be incomplete. Use caution when interpreting data in these categories.***

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Appendix: ISO 21930

ISO 21930 requires alternate assumptions for disclosure of GWP using the TRACI method, and disclosure of results for individual end-of-life pathways. This appendix contains results conforming to ISO 21930.

TRACI

In the following table, results are reported based on required indicators from The Tool for the Reduction and Assessment of Chemical and Other Environmental Impacts (TRACI), version 2.1.

Indicator	Unit	A1	A2	A3	A4	A5	C2	C4
Global warming potential	kg CO_2 eq	6.61E+01	4.89E+00	2.81E+01	6.21E+00	8.02E-01	1.08E-01	4.95E+00
Acidification potential	kg SO_2 eq	3.75E-01	4.98E-02	1.13E-01	4.16E-02	2.80E-04	1.43E-03	2.41E-03
Smog formation potential	kg O_3 eq	3.38E+00	1.43E+00	1.92E+00	1.07E+00	5.77E-03	3.67E-02	7.16E-02
Eutrophication potential	kg N eq	1.38E-01	2.75E-03	6.71E-02	6.70E-03	7.87E-03	8.62E-05	1.25E-01
Ozone depletion potential	kg CFC-11 eq	6.94E-06	1.86E-10	6.08E-06	1.04E-07	1.30E-09	4.58E-12	3.10E-08

Resource use and waste indicators

The following inventory-based indicators are calculated using the suggested methods in the American Center for Life Cycle Assessment (ACLCA) Guidance to Calculating Non-LCIA Inventory Metrics in Accordance with ISO 21930:2017. The abiotic depletion potential metric uses the ReCiPe 2016 midpoint method.

Indicator	Unit	A1	A2	A3	A4	A5	C2	C4
Renewable primary resources used as energy carrier	MJ, LHV	1.15E+02	0.00E+00	1.46E+02	6.30E+00	8.42E-03	0.00E+00	7.08E-02
Renewable primary resources with energy content used as material	MJ, LHV	3.61E+01	0.00E+00	3.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nonrenewable primary resources used as energy carrier	MJ, LHV	1.18E+03	6.28E+01	1.10E+03	9.61E+01	2.56E-01	1.55E+00	2.54E+00
Nonrenewable primary resources with energy content used as material	MJ, LHV	1.57E+02	0.00E+00	2.03E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Secondary materials	kg	1.56E+01	0.00E+00	9.35E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Renewable secondary fuels	MJ, LHV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nonrenewable secondary fuels	MJ, LHV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Recovered energy	MJ, LHV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Freshwater consumed (net)	m^3	4.21E+00	0.00E+00	2.71E+00	8.14E-01	1.78E-04	0.00E+00	5.79E-03
Hazardous waste disposed*	kg	x	x	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nonhazardous waste disposed*	kg	x	x	2.98E-02	0.00E+00	4.15E-01	0.00E+00	0.00E+00
High-level radioactive waste	kg	1.11E-02	2.43E-06	3.78E-02	7.95E-04	3.64E-06	7.50E-08	7.74E-05
Intermediate and low-level radioactive waste	kg	1.00E-02	0.00E+00	4.69E-02	9.13E-04	1.61E-07	0.00E+00	1.26E-06
Components for reuse	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling*	kg	x	x	3.69E-01	0.00E+00	1.15E+00	4.99E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Recovered energy exported from the product system	MJ, LHV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Abiotic depletion potential for fossil resources	kg oil eq.	2.16E+01	1.46E+00	1.36E+01	5.78E+00	5.72E-03	3.60E-02	5.77E-02

Most datasets for upstream materials do not quantify these metrics and thus results may be incomplete. Use caution when interpreting data in these categories.

Carbon dioxide removals and emissions

The following inventory-based indicators of carbon dioxide removals and emissions are calculated using the suggested methods in the American Center for Life Cycle Assessment (ACLCA) Guidance to Calculating Non-LCIA Inventory Metrics in Accordance with ISO 21930:2017.

Indicator	Unit	A1	A2	A3	A4	A5	C2	C4
Biogenic carbon removals (Product)	kg CO_2	-3.99E+00	0.00E+00	-9.97E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon emissions (Product)	kg CO_2	0.00E+00	0.00E+00	3.40E-01	0.00E+00	0.00E+00	0.00E+00	7.10E-01
Biogenic carbon removals (Packaging)	kg CO_2	0.00E+00	0.00E+00	-2.99E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biogenic carbon emissions (Packaging)	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.84E-01	0.00E+00	0.00E+00
Biogenic carbon emissions (Waste combustion)	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbon emissions from calcination	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbon removals from carbonation	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbon emissions from combustion of waste from non-renewable sources used in production	kg CO_2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Results from individual end-of-life pathways

To assist customers in understand how the environmental impact potentials could change based on different end-of-life pathways, the following table presents the total life cycle impact assessment results of the baseline end-of-life scenario as well as 100% recycling, 100% landfill, and 100% incineration (without energy recovery) of the product at its end of life. Not surprisingly, 100% recycling has the lowest impacts and 100% incineration has the highest impacts, except for eutrophication, for which 100% landfill has the most impacts due to leachate in the landfill data set. The impact categories with the most variability are global warming and eutrophication.

Indicator	Unit	Baseline	100% recycled	100% landfilled	100% incinerated
TRACI					
Global warming potential	kg CO_2 eq	1.11E+02	1.06E+02	1.08E+02	1.28E+02
Acidification potential	kg SO_2 eq	5.83E-01	5.81E-01	5.83E-01	5.89E-01
Smog formation potential	kg O_3 eq	7.93E+00	7.85E+00	7.90E+00	8.11E+00
Eutrophication potential	kg N eq	3.48E-01	2.23E-01	4.31E-01	2.31E-01
Ozone depletion potential	kg CFC-11 eq	1.32E-05	1.31E-05	1.32E-05	1.32E-05